

Complete Summary

TITLE

Prenatal testing: percentage of patients who have a determination of blood group (ABO) and D (Rh) type by the second prenatal care visit.

SOURCE(S)

Physician Consortium for Performance Improvement™. Clinical performance measures: prenatal testing. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2005. 4 p. [17 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients who have a blood group (ABO) and D (Rh) type determined by the second prenatal care visit.

RATIONALE

Prenatal testing was selected as a condition-specific measurement set because of the prevalence and incidence of pregnancy; neonatal mortality; prevalence of pregnancy-related complications; related health care costs; and the existence of established clinical recommendations for prenatal testing.

The effects of prenatal care are difficult to quantify. However, appropriate care can promote healthier pregnancies by detecting and managing maternal medical conditions that warrant intervention, identifying fetuses at risk for congenital anomalies, prematurity and still birth, and by providing health care advice to

patients. Maternal medical risk factors have a major influence on pregnancy complications and infant survival. Some of the more serious conditions necessitate close medical supervision to prevent severe complications.

Blood groups, CDE (Rh) type, and antibody screen testing are recommended early in pregnancy.

PRIMARY CLINICAL COMPONENT

Prenatal testing; blood group (ABO) and D (Rh) type testing

DENOMINATOR DESCRIPTION

All patients who gave birth during a 12-month period, seen for continuing prenatal care

NUMERATOR DESCRIPTION

The number of patients whose blood group (ABO) and D (Rh) type have been determined by the second prenatal care visit

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Prevention of Rh D alloimmunization.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Golden WE, Wells C. Evaluating prenatal care in Arkansas. J Ark Med Soc 2002 Mar; 98(9):296-7. [PubMed](#)

State of Use of the Measure

STATE OF USE

Pilot testing

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Unspecified

TARGET POPULATION GENDER

Female (only)

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Maternal

- More than 6 million women become pregnant annually and give birth to more than 4 million live infants each year. Although the percentage of women who begin prenatal care in the first trimester rose to 82.8% in 1998 (an increase of 10% in the last decade), 3.9% of mothers received late care or no prenatal care, unchanged since 1997

Infant

- The United States (U.S.) continues to rank 22nd to 25th in the International Infant Mortality Rate Index, a rate significantly behind that of other major industrialized countries

EVIDENCE FOR INCIDENCE/PREVALENCE

Murphy SL. Deaths: final data for 1998. Natl Vital Stat Rep2000 Jul 24; 48(11):1-105. [PubMed](#)

Ventura SJ, Martin JA, Curtin SC, Mathews TJ, Park MM. Births: final data for 1998. Natl Vital Stat Rep2000 Mar 28; 48(3):1-100. [PubMed](#)

Ventura SJ, Mosher WD, Curtin SC, Abma JC, Henshaw S. Highlights of trends in pregnancies and pregnancy rates by outcome: estimates for the United States, 1976-96. Natl Vital Stat Rep1999 Dec 15; 47(29):1-9. [PubMed](#)

ASSOCIATION WITH VULNERABLE POPULATIONS

Among vulnerable populations (e.g., urban, minority), prenatal care is initiated later and there are fewer prenatal visits than among white women.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Milligan R, Wingrove BK, Richards L, Rodan M, Monroe-Lord L, Jackson V, Hatcher B, Harris C, Henderson C, Johnson AA. Perceptions about prenatal care: views of urban vulnerable groups. BMC Public Health2002 Nov 6; 2(1):25. [PubMed](#)

BURDEN OF ILLNESS

Maternal

- The maternal mortality ratio was 7.1 per 100,000 live births in 1998. This ratio has not significantly decreased since 1982.

Infant

- Infants born in multiple births, which have risen rapidly since 1990, are at greater risk for prematurity or low birthweight.
- The five leading causes of infant mortality are congenital anomalies, prematurity/low birthweight, sudden infant death syndrome, maternal pregnancy complication, and respiratory distress syndrome.

EVIDENCE FOR BURDEN OF ILLNESS

Maternal mortality--United States, 1982-1996. MMWR Morb Mortal Wkly Rep1998 Sep 4; 47(34):705-7. [PubMed](#)

Murphy SL. Deaths: final data for 1998. Natl Vital Stat Rep 2000 Jul 24; 48(11): 1-105. [PubMed](#)

UTILIZATION

Unspecified

COSTS

- The estimated lifetime costs for 18 of the most clinically significant birth defects in the United States were \$8 billion in 1992.
- The lifetime medical costs for one premature baby are conservatively estimated at \$500,000.
- Health care, education, and child care for the 3.5 to 4 million infants and children from birth to age 15 years born with low birthweight cost between \$5.5 and \$6 billion more than if those children had been born at normal birthweight.

EVIDENCE FOR COSTS

U.S. Preventive Services Task Force. Guide to clinical preventive services: report of the U.S. Preventive Services Task Force. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. 953 p.

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All patients who gave birth during a 12-month period, seen for continuing prenatal care

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All patients who gave birth during a 12-month period, seen for continuing prenatal care

Exclusions

None

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition

DENOMINATOR TIME WINDOW

Time window follows index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

The number of patients receiving testing to determine blood group (ABO) and D (Rh) type during the first or second prenatal visit, and whose medical record contains physician documentation or prior laboratory results of the patient's blood group (ABO) and D (Rh) type

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Encounter or point in time

DATA SOURCE

Laboratory data

Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

The American College of Obstetricians and Gynecologists' (ACOG) Antepartum Record

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

A demonstration project to test the validity and reliability of measures, as well as their usefulness to practicing physicians, is under way. The Arkansas Foundation for Medical Care (AFMC) has evaluated these prenatal testing measures.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

Golden WE, Wells C. Evaluating prenatal care in Arkansas. J Ark Med Soc 2002 Mar; 98(9):296-7. [PubMed](#)

Identifying Information

ORIGINAL TITLE

Blood groups (ABO), D (Rh) type, and antibody testing.

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement Measurement Sets](#)

MEASURE SET NAME

[Physician Consortium for Performance Improvement: Prenatal Testing Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the Physician Consortium for Performance Improvement

DEVELOPER

Physician Consortium for Performance Improvement

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2002 Jan

REVISION DATE

2005 Aug

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: Physician Consortium for Performance Improvement, Prenatal Testing Work Group. Prenatal testing. Physician performance measurement set. Chicago (IL): American Medical Association (AMA); 2002. 45 p.

SOURCE(S)

Physician Consortium for Performance Improvement™. Clinical performance measures: prenatal testing. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2005. 4 p. [17 references]

MEASURE AVAILABILITY

The individual measure, "Blood Groups (ABO), D (Rh) Type, and Antibody Testing," is published in the "Clinical Performance Measures: Prenatal Testing." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

COMPANION DOCUMENTS

The following are available:

- Physician Consortium for Performance Improvement. Introduction to physician performance measurement sets. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2001 Oct. 21 p. This document is available from the American Medical Association (AMA) Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.
- Physician Consortium for Performance Improvement. Principles for performance measurement in health care. A consensus statement. [online]. Chicago (IL): American Medical Association (AMA), Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), National Committee for Quality Assurance (NCQA); [3 p]. This document is available from the AMA Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.
- Physician Consortium for Performance Improvement. Desirable attributes of performance measures. A consensus statement. [online]. American Medical Association (AMA), Joint Commission on Accreditation of Healthcare Organizations (JCAHO), National Committee for Quality Assurance (NCQA); 1999 Apr 19 [cited 2002 Jun 19]. [5 p]. This document is available from the AMA Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI on November 25, 2002. The information was verified by the Physician Consortium for Performance Improvement on August 28, 2003. This NQMC summary was updated by ECRI on November 14, 2005. The information was verified by the measure developer on February 16, 2006.

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These Measures are intended to assist physicians in enhancing quality of care. Measures are designed for use by any physician who manages the care of a patient for a specific condition or for prevention. These performance Measures are not clinical guidelines and do not establish a standard of medical care. The Consortium has not tested its Measures for all potential applications. The Consortium encourages the testing and evaluation of its Measures.

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